USER GUIDE

T58P/S

Thermal Printer

SHENZHEN ICOD DIGITAL CO., LTD.

DECLARE

§ This product belongs to A grade, maybe it will cause radio disturbance at natural enviroment, In such circumstances, needs that the user takes practicable measures for it.

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----- Eidition: 1.0 <2007.06>

Security Information

In order to use your printer in effectiveness and security, Please obey the following rules.

→Before Use

- **In order to hold the ture usage method, Before using printer, please read this user's manual particularly.**
- **Please put this《User's Manual》on the convenient position, In order to take out reading and solving problems at any moment.**

→Notices In Security

If neglect the following notice matters, incorrect use may be bring damage.

NOTICE

◇ **If occurred paper jams, make sure turining off button as the first step, waiting for ten seconds, in order to cool down the print head, and then clearing away the paper.**

◇ **Please don't set this product in the humid or dusty enviroment.**

◇ **No pressing, No dumping.**

Roller Paper

◇ **Make sure to use the specific roller paper which fit for this manual.**

◇ **Don't be used the roller paper which the end be felted on the paper axes, Or, the printer can't detect the end of roller paper exactly, may be could bring damage to printer; Aslo can't choose the roller paper which without paper axes, Or, may be when printing to the end, Paper jams occurred because of the paper barycentre is not enough.**

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Chapter Ⅰ Introduction

1.1 Technique Specification

Item	Parameter
Printing Mode	Direct thermal line printing
Printing Speed	About 50 ㎜/second
Printing Width	57.5±0.5 ㎜
Printing Density	8dot/㎜, 384dot/line
Effective Printing Width	48 ㎜
Paper Solve Method	Manual cut
Detectation of Without Paper	Photoelectricity Sensor
Life of Print Head	50KM

1.2Printing Paper

Item	Parameter
Roll Paper Type	Thermal paper
Specification of Roll Paper	Width: 76.2 ±0.5 ㎜; Max Outer Diameter: ∮80 ㎜ Min Inner Diameter: ∮10 ㎜; Thickness: 53～60g/㎡

1.3Printing Character

Item	Parameter
ANK Character Set	12×24dot, 1.25(width)×3.00(height) ㎜
International Standard Ⅰ、Ⅱ Class	24×24dot
Chinese Font	3.00(width) ×3.00(height) ㎜

1.4Interface Form

Item	Parameter
Serial Interface	D-SUB 25 thread socket(female), Support RTS/CTS; Baud rate: 9600bps; Data structure: 1 bit(start bit)+8bit(Data bit)+1bit or above (stop bit)

Parallet Interface	8 digit Parellel Interface, BUSY handshake protocol, PE without paper detect interface socket use D-SUB25 thread socket(male)
Cash Drawer Control	DC 12V/24V, 1 A, 6 Thread RJ-11 Socket

1.5 Control Command

Item	Parameter
Dot Printing Command	Support different density dot and load graphics printing
Character Printing Command	Support ANK character, user difined character and Chinese characters double width printing, double height printing, the gap of the characters are adjustable

1.6Power and Operating Environment Request

Item	Parameter
Power Supply	DC12V/DV24V, 2A
Operating Temp	5～40
Operating Relative Humidity	10～80%
Storage Temp	－20～60℃
Storage Relative Humidity	10～90%

1.7 Dimension and Weight

Item	Parameter
Dimension	215(L)×135(W)×133(H)㎜
Weight	810g (Without Roller)

Chapter Ⅱ Installation and Operation

2.1 Printer Dimension

Figure2-1 The printer dimension

2.2 Control Board

T58D Printer Board has one keys and three indicator lights, the graphic 2-2.1 as follows:

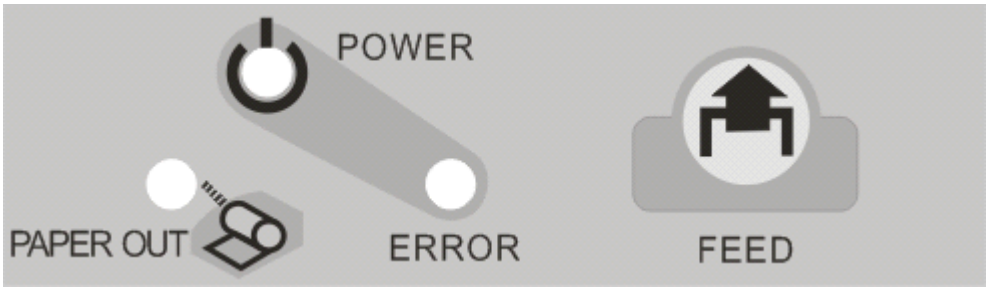


Figure 2-2.1 The sketch graphic of control board

2.3 Indicator light and key operation

Indicator:

☐ Power light: Normal work, the green light is bright

☐ Fault light: Abnormally, error indicator light will flash

Print head over temp

Print head over temp, error light flashed till restoring by itself.

☐ No paper light, when the paper not be set well, or no paper, the light will be bright.

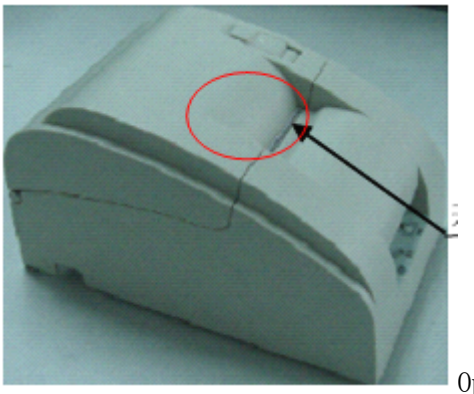
Key:

☐ Under the general pattern, pressing the key, printer paper moved ahead.

☐ Self-test pattern, Installed the paper, and shut the cover lightly, First press the paper carrier button on the cutting power conditions, then turnning on power supply, putting the paper carrier button away less than 5 seconds, the printer moves to self-test pattern, and print self-test list.

☐ Hex printing method: Installed the paper, and pressed the paper carrier button and turnned on the power supply, About 5 senconds, “No paper” light is bright, this time loosen the button, Print according to the information of hex printing method and print the data which received by interface according to hex printing method.

☐ Openning cover spanner: as the picture 2-2.2.



Openning cover spanner

Figure2-2.2 Openning cover spanner

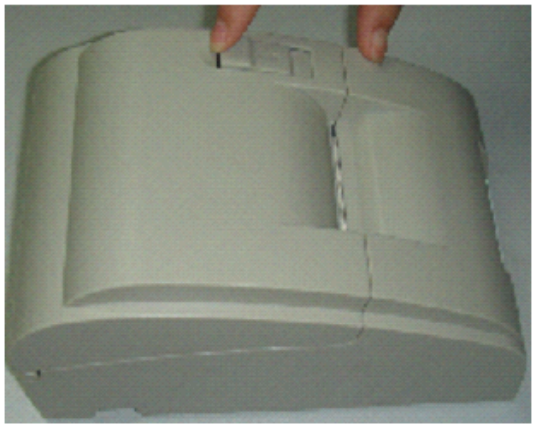
2.4 Installing paper

The steps of installing thermal paper:

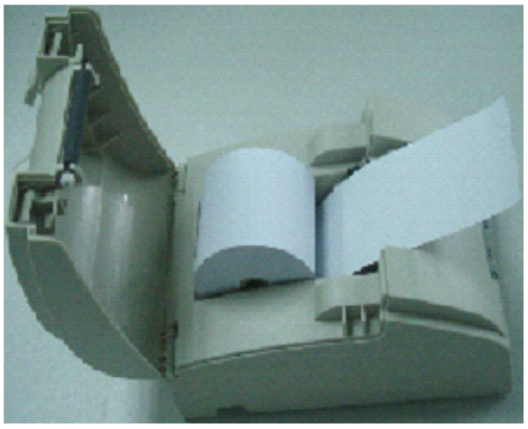
☐ Open the cover through pulling spanner as the picture 2-3.1.

☐ Install the roller paper into the paper storage as the picture direction, then pulling a part of paper along the paper storage, and put flat on the print head as the picture 2-3.2.

☐ Put the cover down, and close the cover lightly as the picture 2-3.2; Restore to the primary position, then, install the printing paper as the picture 2-3.4.



Picture 2-3.1 Open the cover



Picture 2-3.2 Install the paper

Picture 2-3.3 Close the cover

Picture 2-3.3 Installing finished

2.5 Interface connection

2.5.1 Serial interface connection

The serial interface of T58D printer is compatible with RS232C, supports RTS/CTS, and the interface socket is 25PIN female D modle socket.

Per pin signal definition

Pin	Signal Name	Signal Source	Inllustration
3	RXD	Host computer	Receive data
4	RTS	Printer	Could receive data
7	GND	------	Logically
2	TXD	Printer	Transmit data

The serial interface device which default by printer:

Baud rate: 9600bps
Data bit: 8 bits
Check-out: No
Stop bits: 1 bit or more than 1 bit
Handshake method: RTS/CTS

The serial interface of T58D printer can connect with standard RS-232C interface. When connecting with PC , the graphic as 2-2.4.

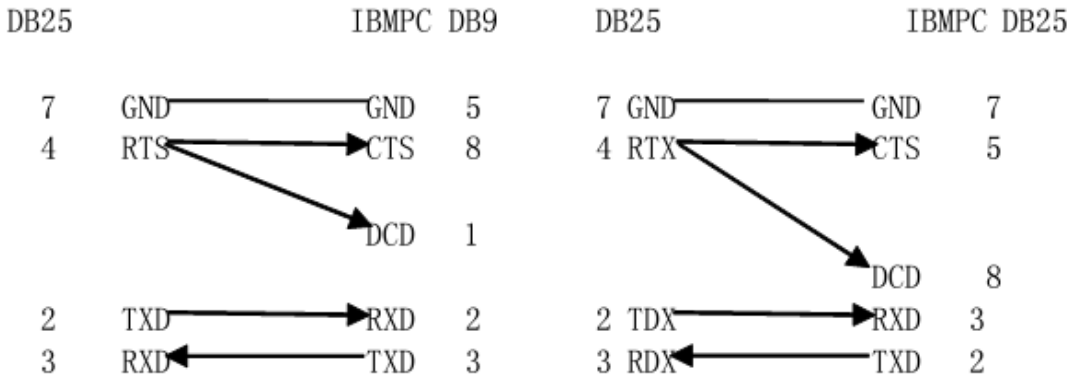


Figure2-4.1. The connection figure of printer serial interface and PC serial interface

2.5.2 Parellel interface connection

The parallel interface of T58D printer is 8 digit parellel interface, supporting BUSY handshake protocal, and the interface socket used DB25 thread socket(male).

Parallel interface signal per pin

Pin	Signal	Signal Source	Function
1	nStrobe	H	Data is selected through spring pulse, receiving data at decline.
2	DATA1	H	
3	DATA2	H	
4	DATA3	H	
5	DATA4	H	0------7 are data bits
6	DATA5	H	
7	DATA6	H	
8	DATA7	H	
9	DATA8	H	

10	nAck	P	Input impendence “high” level
11	BUSY	P	“High” level indicates that printer is “busy” now, can’t receive date
12	PE	P	“High” level indicates that print paper-end
13	SEL	P	Input impedance “high” level
15	nERR	P	Input impedance “high” level
14、16、17	NC		Not frame ground
17-18	GND		Frame ground

H: means computer, P: means printer

Refer to the parallel connection pattern interface signal time sequence as the graphic 2-4.2

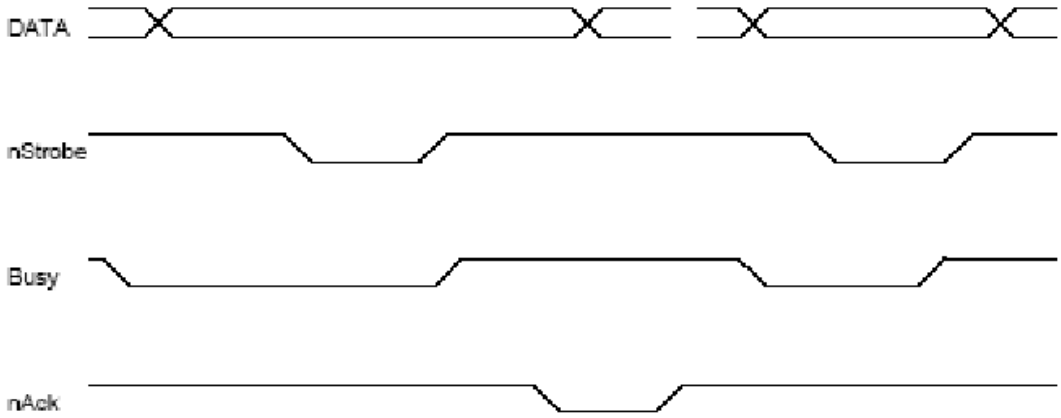


Figure 2-4.2. Parellel Interface Signal Time Sequence

2.5.3 Cash drawer interface

The cash drawer interface of T58D printer used RJ-11, 6 thread socket, as the diagram 2-4.3

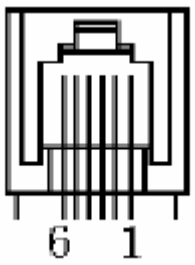


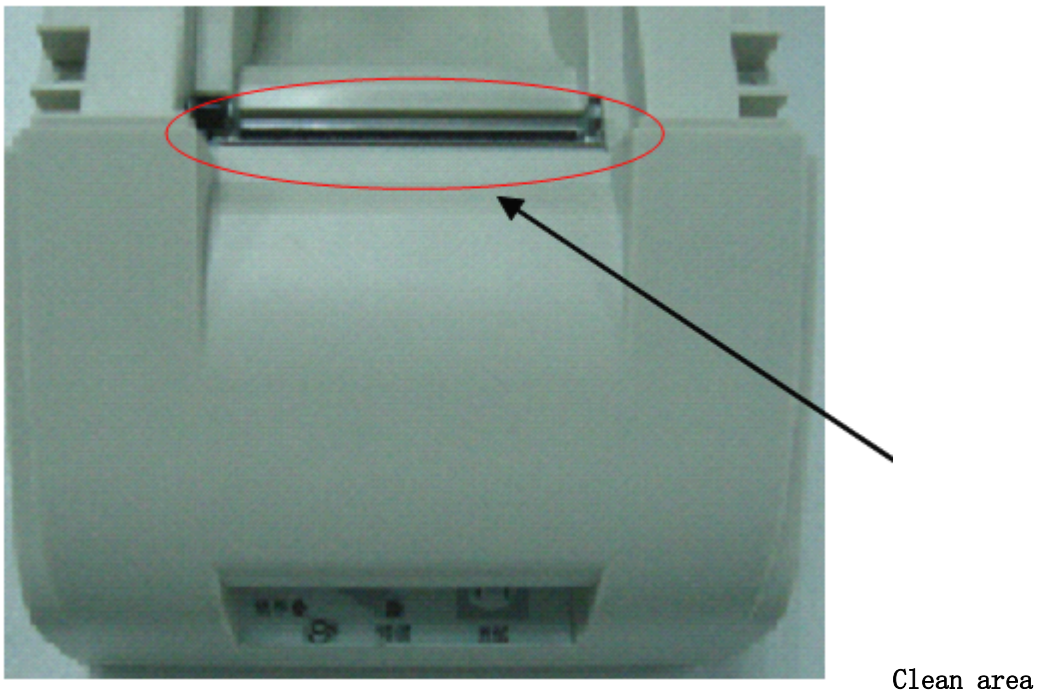
Figure 2-4.3. Cash drawer interface

Pin definition as follows:

Pin No.	Signal	Direction
1	Structure	------
2	Cash drawer drive signal	Output
3	Cash drawer on/off status signal	Input
4	Cash drawer power: DC12V/DC24V	Output
5	N.C.	------
6	Cash drawer on/off status signal ground	------

2.6 Clear print head

When printer used a period of time, and occurred the unclear character, should be cleanned at once, the steps as the picture 2-5:



Picture2-5 Print head clean area

☐ Make sure that the power has turnned off, and the power and communication cable have took off.

☐ Open the printer cover, and take the print paper out, then touch a little alcohol which needed to use absorbent button, clean the dirtiness on the print head.

☐ After cleanning, wait for the alcohol which on the print head have volatilized, then installing the paper and closing the cover. At last, connecting power and turing into self-test, observing the cleaning

effectiveness.

Chapter Ⅲ Malfunction Exclusion

4.1 Command Illustration

Malfunction Phenomenon	Solution
Not electrified	Examine that the power adapter whether outputted woltage or not. Examine that the power output plug and printer whether connected well or not. Examine that the printer's power button whether openned or not.
Not carried the paper	Examine that the printer's roller paper whether used or not. Examine that the printer's roller paper whether jammed or not. Examine that the printer's test paper is dirty or not. Examine that the printer's cover pressing paper wheel whether pressed to position or not.
Printing unclear	Examine that the print head is dirty or not. Examine that the print paper is wet or not.
Not printed	Examine that the interface line of printer and PC whether connected well or not.

Chapter Ⅳ Printing Table

4.1 Command Illustration

Command	Inllustration
LF	Print and change a new line
ESC J n	Print and feed paper n dot lines
ESC 2	Set character line spacing 1/6 feet
ESC 3 n	Set line spacing n dot lines(n/203 feet)
ESC ! n	Set character printing method
ESC SO	Permit character double width printing
ESC DC4	Cancel character double width printing
ESC % n	Permit/prohibit user-defined character
ESC & s n m	Set user-defined character
ESC c 5 n	Permit/prohibit pressing button command
ESC * m n1 n2 d1.....dk	Set dot command
ESC * n1 n2 d1.....dk	Defined load dot
GS / n	Print load dot
GS w n	Set bar code width
GS h n	Set bar code height
① GS k m d1.....dk NUL	Print bar code
② GS k m n d1.....dn	
ESC @	Initialization
ESC p m n1 n2	Cash drawer control
ESC v	Send the printing status to the host computer
ESC u n	Send the ambient equipment status to the host computer

4.2 Printing command

4.2.1 Printing command

LF

Print and change a new line

Form　　ASCⅡ: LF

DECIMAL: 10

HEX: 0A

Description Printing content in the line buffer and move one paper line ahead, when line buffer is empty, only moving one line ahead

ESC J n

Print and feed paper n dot lines

form ASCII: ESC J n

DECIMAL: 27 74 n

HEX: 1B 4A n

Description Printing content in the line buffer and move n dot lines ahead(n/203feet) n=0～255

This orders only effected to this line, not change the line spacing which set by ESC 2, ES 3 command

4.2.2 Setting command for line spacing

ESC 2

Set character line spacing 1/6 feet

Form ASCII: ESC 2

DECIMAL: 27 50

HEX: 1B 32

Set line spacing 1/6 feet

ESC 3 n

Set line spacing n dot lines(n/203 feet)

Form ASCII: ESC 3 n

DECIMAL: 27 51 n

HEX: 1B 33 n

Description Set line spacing n dot lines. n =0～255

This orders set line spacing n/203 feet. Default value: n=30

4.2.3 Character printing command

ESC ! n

Set character printing pattern

Form ASCII: ESC ! n
DECIMAL: 27 33 n
HEX: 1B 21 n

Description Set line spacing n dot lines. n =0～255
ESC ! n is a comprehensive character printing pattern seeting orders, be used to choose the size of printing character. The default value of n is 0, that's to say, character isn't be extended. The definition of per printing parameter n as follows:

1: Double height printing
1: Double height printing

ESC SO

Permit character double width printing

Form ASCII: ESC SO
DECIMAL: 27 14
HEX: 1B OE

Description At the same line, all characters behinds this order be printed two times than the normal width.
This orders could be deleted by Enter or DC3 command

ESC DC4

Cancel character double width printing

Form ASCII: ESC DC4
DECIMAL: 27 20
HEX: 1B 14

Description Resume normal printing.

ESC % n

Enable/Disable user-defined character

Form ASCII: ESC % n
DECIMAL: 27 37 n
HEX: 1B 25 n

Description When n =1, choose user-defined character fond; when n =0, choose interior character fond

Default value n =0

ESC & s n m

Set user-defined character

Form ASCII: ESC & S n m 〔a〔p〕s×a〕m－n＋1
DECIMAL: 27 38 S n m 〔a〔p〕s×a〕m－n＋1
HEX: 1B 26 S n m 〔a〔p〕s×a〕m－n＋1

Description ESC & is used to define user-defined character. S=3, 32≤n≤m≤126
0≤a≤12, 0≤p≤255.
s is number of vertical bytes. Default value S=3
n is starting ASCII code for user-defined character
m is ending ASCII code for user-defined character.
When define one character only, m=n, maximum number of user-defind charcters is 96
a is the number of the horizontal dots
p is the byte of total number of user-defined characters is m-n+1
After defining, the user-defined character always effects, till defining again or reposition or turn off print.

4.2.4 Special Control Command

ESC c 5 n

Enable/disable panel buttons

Form ASCII: ESC c 5 n
DECIMAL: 27 99 53 n
HEX: 1B 63 35 n

Description When the LSB of n is 0, the panel buttons are enabled.

When the LSB of n is 1, the panel buttons are disabled

4.2.5 Graphic Printing Commands

ESC * m n1 n2 d1.....dk

Set dot command

Form ASCII: ESC * m n n1 n2 〔d〕k

DECIMAL: 27 42 m n n1 n2 〔d〕k

HEX: 1B 2A m n n1 n2 〔d〕k

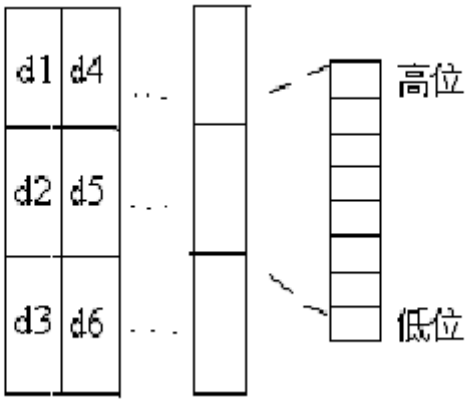
Description m for setting bit-map graphics mode; n1 n2 for setting number of dots; [d]k for setting content of dots.

m=0, 1, 32, 33. n1=0～255, n2=0～3. d=0～255

K=n1+256×n2(m=0, 1); k=(n1+6×n2) ×3(m=32, 33)

Horizontal dots is n1+256 x n2

If the dot counts over one line, the part which over the biggest dot count will be negelected(connected with the chosen dot graphics pattern, the specifics as the following table)

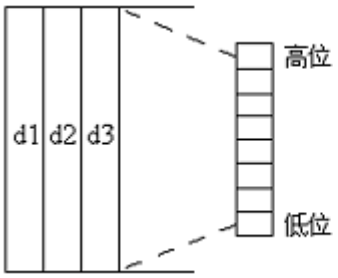


- ☐ d is dot graphics data byte, relevant dot is 1, which means that this dot should be printed;relevant dot is 0, which means that this dot shouldn't be printed.
- ☐ m be used to choose dot graphics pattern.

M	Mode	Vertical		Horizontal	
		Dot count	Dot density	Dot density	The most of dot counts
0	8 dot single density	8	68 DPI	101 DPI	192
1	8 dot double density	8	68 DPI	203 DPI	384

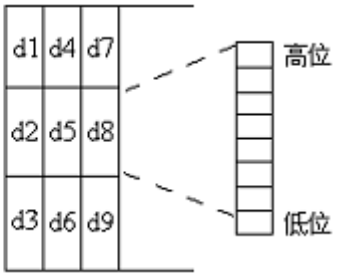
32	24 dot single density	24	203 DPI	101DPI	192
33	24 dot double density	24	203 DPI	203DPI	384

8 dot pattern



Dot graphics data(bit graphic)

24 dot pattern



Dot graphics data(bit graphic)

GS / n

Print download bit image

Form ASCII: GS / n
DECIMAL: 29 47 n
DEX: 1D 2F n

Description Prints a downloaded bit image using the mode specified by m.
n selects a mode from the table below

n	Dot graphics pattern	Veritical density	Horizontal density
0	Normal	203 DPI	203 DPI
1	Double -width	203 DPI	101 DPI
2	Double -height	101 DPI	203 DPI
3	Double height and width pattern	101 DPI	101 DPI

GS * n1 n2 d1.....dk

Defined download bit image

Form ASCII: GS * n1 n2 〔d〕k

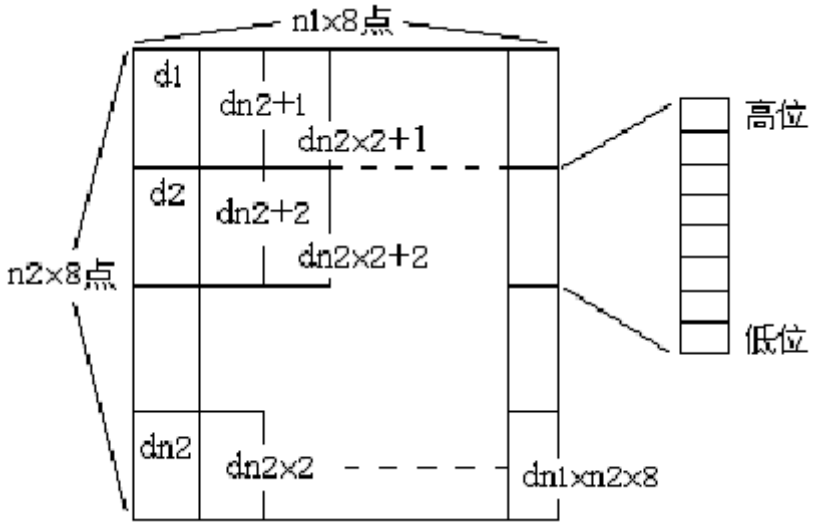
DECIMAL: 29 42 n1 n2 〔d〕k

HEX: 1D 2A n1 n2 〔d〕k

Description This command for set of down-load bit-map graphics

n 1=1～48, n2=1～255, n1×n2＜1200, k=n1×n2×8

d is data byte of the down-load bit-map graphics, horizontal n1×8 dot; vertical n2×8; Setting o f down-load bit-map graphics remain valid till new definition or power off.



4.2.6 Bar code command

GS w n

Set bar code width

Form ASCII: GS w n

HEX: 1d 77 n

DECIMAL: 29 119 n

Description ☐ Set the horizontal size of the bar code., 2≤n≤3

☐n specifies the bar code width as follows:

N	Bar code
2	Normal
3	Wide bar code

☐ Support the below bar code:

CODE 128, CODE 39, ITF
Default value is n =2
Relevant command: GS K

GS h n

Set bar code height

Form ASCII: GS h n
HEX : 1D 68 n
DECIMAL : 29 104 n

Description ☐ Set bar code height, 1≤n≤255;
☐ n be set the vertical dot counts
☐ Default value is n=50
☐ Relevant command: GS K

①GS k m d1.....dk NUL

②GS k m n d1.....dn

Print bar code

Form ①ASCII code: GS k m d1.....dk NUL
HEX: 1D 6B m d1.....dk 00
DECIMAL: 29 107 m d1.....dk 0
②ASCII code: GS k m n d1.....dn
HEX: 1D 6B m n d1.....dn
DECIMAL: 29 107 m n d1.....dn

Description ☐ Choose bar code system and print bar code:
① 4≤m≤5 (k and d decided by using bar code system)
② m=73 (n and d decided by using bar code system)
☐ m set the bar code system as follows:

	M	Bar code system	Character units	Notes
①	4	CODE39	1≤K	48 ≤ d ≤ 57, 65 ≤ d ≤ 90, 32, 36, 37, 43, 45, 46, 47

	5	ITF	1 ≤ K(k is even)	48≤d≤57
②	73	CODE128	1≤n≤255	0≤d≤127

【**Note①**】

• This command ends with a NUL code.

• The number of data for ITF bar code must be even numbers. When an odd number of data is input, the printer ignores the last received data.

【Note②】

n indicates the number of bar code data, and the printer processes n bytes from the next character data as bar code data.

• If n is outside of the specified range, the printer stops command processing and processes the following data as normal data.

•This command feeds as much paper as is required to print the bar code, regardless of the line spacing specified by ESC 2 or ESC 3.

• This command is enabled only when no data exists in the print buffer. When data exists in the print buffer, the printer processes the data following m as normal data.

• After printing bar code, this command sets the print position to the beginning of the line.

•This orders no effected by printing pattern(the size of character and so on), except reverse printing pattern.

When using CODE128(m=73):

• About the information of CODE128 bar code and code table, please consult appendix Ⅰ.

•When this printer uses CODE128, please consult the below factors which refers to sending the data:

① The head of bar code data must be the chosen character(CODE A,CODE B, or CODE C) of code fond, be used to choose the first used code fond.

② Defined special characters by used “{” and a group of characters, Through sending two “{” definition continually and defined ASCII character “{”.

Special character	Sending data		
	ASCII code	HEX	DECIMAL
SHIFT	{ S	7B, 53	123, 83
CODE A	{ A	7B, 41	123, 65
CODE B	{ B	7B, 42	123, 66
CODE C	{ C	7B, 43	123, 67
FNC 1	{1	7B, 31	123, 49
FNC 2	{2	7B, 32	123, 50

FNC 3	{3	7B, 33	123, 51
FNC 4	{4	7B, 34	123, 52
“{”	{ {	7B, 7B,	123, 123

- If the data serial head of bar code is not the code fond chosen character, so the printer stop dealing with command, and treat the continued data as the general data.
- If the combination of “{” and continued characters isn’t fitting for any special characters, so the printer stop dealing with command, and treat the continued data as the general data.
- If the printer can’t receive the characters which should be used to special code fond, so the printer stop dealing with command, and treat the continued data as the general data.

4.2.7 Other commands

ESC @

Initialize printer

Form ASCII: ESC @
DECIMAL: 27 64
HEX: 1B 40

Description ESC @ command initializes the following contents:

- ☐ Clear the data in the print buffer;
- ☐ Restore default value;
- ☐ Choose character printing pattern;
- ☐ Delete user-defined character.

ESC p m n1 n2

Cash draw control

Form ASCII: ESC p m n1 n2
DECIMAL: 27 112 m n1 n2
HEX: 1B 27 m n1 n2

Description According to n1,n2, and produced the pulse which existed a certain time space, this orders be used to control the cash drawer movement.

m=0, 0＜n1≤n2≤255
The open time is n1×2ms, the closed time is n2×2ms

ESC v

Send the printing status to the host computer

Form ASCII: ESC v
DECIMAL: 27 118
HEX: 1B 76

Description It only effects to the serial model printer(T58DS).
When the printer received this orders, sending a byte to up-printer through serial interface TXD.
Each bit of this byte defined as follows:

Bit	Function	Data	
		0	1
0	Undefined	-------	-------
1	Undefined	-------	-------
2	Paper test instrument	With paper	Without paper
3	Undefined	-------	-------
4	Unused	Identical data is 0	Identical data is 0
5	Undefined	-------	-------
6	Undefined	-------	-------
7	Undefined	-------	-------

ESC u n

Send the ambient equipment status to the host computer

Form ASCII: ESC u n
DECIMAL: 27 117 n
HEX: 1B 75 n

Description It only effects to the serial model printer T58DS.
Default value n=0.
When the printer received this orders, sending a byte to up-printer through serial interface TXD.

Each bit of this byte defined as follows:

Bit	Function	Data	
		0	1
0	Cash drawer open/close level	“Low”	“High”
1	Undefined	-------	-------
2	Undefined	-------	-------
3	Undefined	-------	-------
4	Unused	Identical data is 0	-------
5	Undefined	-------	-------
6	Undefined	-------	-------
7	Undefined	-------	-------

Appendix Ⅰ: CODE128 BAR CODE

1.The description of the CODE128 BAR CODE

In CODE128 bar code system, it is possible to represent 128 ASCII characters and 2-digit numerals using one bar code character that is defined by combining one of the 103 bar code characters and 3 code sets. Each code set is used for representing the following characters:

• Code set A: ASCII characters 00H to 5FH

• Code set B: ASCII characters 20H to 7FH

• Code set C: 2-digit numeral characters using one character (100 numerals from 00 to 99)

The following special characters are also available in CODE128:

• SHIFT characters

In code set A, the character just after SHIFT is processed as a character for code set B. In code

set B, the character just after SHIFT is processed as the character for code set A. SHIFT characters cannot be used in code set C.

• Code set selection character (CODE A, CODE B, CODE C)

This character switches the following code set to code set A, B, or C.

• Function character (FNC1, FNC2, FNC3, FNC4)

The usage of function characters depends on the application software. In code set C, only FNC1 is available.

Code Tables

Printing character in code set A

CR	0D	13	5	35	53	]	5D	93
SO	0E	14	6	36	54	^	5E	94
SI	0F	15	7	37	55	_	5F	95
DLE	10	16	8	38	56	FNC1	7B, 31	123, 49
DC1	11	17	9	39	57	FNC2	7B, 32	123, 50
DC2	12	18	:	3A	58	FNC3	7B, 33	123, 51
DC3	13	19	;	3B	59	FNC4	7B, 34	123, 52
DC4	14	20	<	3C	60	SHIFT	7B, 53	123, 83
NAK	15	21	=	3D	61	CODEB	7B, 42	123, 66
SYN	16	22	>	3E	62	CODEC	7B, 43	123, 67
ETB	17	23	?	3F	63			
CAN	18	24	@	40	64			
EM	19	25	A	41	65			
SUB	1A	26	B	42	66			
ESC	1B	27	C	43	67			
FS	1C	28	D	44	68			
GS	1D	29	E	45	69			
RS	1E	30	F	46	70			
US	1F	31	G	47	71			
SP	20	32	H	48	72			
!	21	33	I	49	73			
"	22	34	J	4A	74			
#	23	35	K	4B	75			
$	24	36	L	4C	76			
%	25	37	M	4D	77			
&	26	38	N	4E	78			
'	27	39	O	4F	79			

Printable character in code set B

Character	Transmit Data		Character	Transmit Data		Character	Transmit Data	
	Hex	Decimal		Hex	Decimal		Hex	Decimal
SP	20	32	H	48	72	p	70	112
!	21	33	I	49	73	q	71	113
"	22	34	J	4A	74	r	72	114
#	23	35	K	4B	75	s	73	115
$	24	36	L	4C	76	t	74	116
%	25	37	M	4D	77	u	75	117
&	26	38	N	4E	78	v	76	118
'	27	39	O	4F	79	w	77	119
(	28	40	P	50	80	x	78	120
)	29	41	Q	51	81	y	79	121
*	2A	42	R	52	82	z	7A	122
+	2B	43	S	53	83	{	7B,7B	123,123
,	2C	44	T	54	84	|	7C	124
-	2D	45	U	55	85	}	7D	125
.	2E	46	V	56	86	~	7E	126
/	2F	47	W	57	87	DEL	7F	127
0	30	48	X	58	88	FNC1	7B,31	123,49
1	31	49	Y	59	89	FNC2	7B,32	123,50
2	32	50	Z	5A	90	FNC3	7B,33	123,51
3	33	51	[	5B	91	FNC4	7B,34	123,52
4	34	52	\	5C	92	SHIFT	7B,53	123,83
5	35	53	]	5D	93	CODE A	7B,41	123,66
6	36	54	^	5E	94	CODE C	7B,43	123,67
7	37	55	_	5F	95			
8	38	56	`	60	96			
9	39	57	a	61	97			
:	3A	58	b	62	98			
;	3B	59	c	63	99			
<	3C	60	d	64	100			
=	3D	61	e	65	101			
>	3E	62	f	66	102			
?	3F	63	g	67	103			
@	40	64	h	68	104			
A	41	65	i	69	105			
B	42	66	j	6A	106			
C	43	67	k	6B	107			
D	44	68	l	6C	108			
E	45	69	m	6D	109			
F	46	70	n	6E	110			
G	47	71	o	6F	111			

Printing character among code fond C

Character	Transmit Data		Character	Transmit Data		Character	Transmit Data	
	Hex	Decimal		Hex	Decimal		Hex	Decimal
00	00	0	40	28	40	80	50	80
01	01	1	41	29	41	81	51	81
02	02	2	42	2A	42	82	52	82
03	03	3	43	2B	43	83	53	83
04	04	4	44	2C	44	84	54	84
05	05	5	45	2D	45	85	55	85
06	06	6	46	2E	46	86	56	86
07	07	7	47	2F	47	87	57	87
08	08	8	48	30	48	88	58	88
09	09	9	49	31	49	89	59	89
10	0A	10	50	32	50	90	5A	90
11	0B	11	51	33	51	91	5B	91
12	0C	12	52	34	52	92	5C	92
13	0D	13	53	35	53	93	5D	93
14	0E	14	54	36	54	94	5E	94
15	0F	15	55	37	55	95	5F	95
16	10	16	56	38	56	96	60	96
17	11	17	57	39	57	97	61	97
18	12	18	58	3A	58	98	62	98
19	13	19	59	3B	59	99	63	99
20	14	20	60	3C	60	FNC1	7B,31	123,49
21	15	21	61	3D	61	CODE A	7B,41	123,65
22	16	22	62	3E	62	CODE B	7B,42	123,66
23	17	23	63	3F	63			
24	18	24	64	40	64			
25	19	25	65	41	65			
26	1A	26	66	42	66			
27	1B	27	67	43	67			
28	1C	28	68	44	68			
29	1D	29	69	45	69			
30	1E	30	70	46	70			
31	1F	31	71	47	71			
32	20	32	72	48	72			
33	21	33	73	49	73			
34	22	34	74	4A	74			
35	23	35	75	4B	75			
36	24	36	76	4C	76			
37	25	37	77	4D	77			
38	26	38	78	4E	78			
39	27	39	79	4F	79			